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FILE COVERS 1907 - 10 Dec 2006 VOL 145 ISS 25

FILE LAST UPDATED: 8 Dec 2006 (20061208/ED)

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=> s de19632922/pn

L1 1 DE19632922/PN

=> d l1 iall

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:126444 CAPLUS

DOCUMENT NUMBER: 128:127751

ENTRY DATE: Entered STN: 02 Mar 1998

TITLE: Process for the production of hydroxypivalic acid by the hydrogen peroxide oxidation of hydroxypivalaldehyde

INVENTOR(S): Neumann, Karl Heinz; Joentgen, Winfried; Heitkamp, Dieter; Fiege, Helmut

PATENT ASSIGNEE(S): Bayer A.-G., Germany

SOURCE: Ger. Offen., 4 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

INT. PATENT CLASSIF.:

MAIN: C07C059-01

SECONDARY: C07C051-285; C07C051-235

CLASSIFICATION: 23-16 (Aliphatic Compounds)

Section cross-reference(s): 42, 45

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:



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NEWS	4	AUG 28	ADISCTI Reloaded and Enhanced
NEWS	5	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS	6	SEP 11	CA/CAplus enhanced with more pre-1907 records
NEWS	7	SEP 21	CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS	8	SEP 25	CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS	9	SEP 25	CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS	10	SEP 25	CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS	11	SEP 28	CEABA-VTB classification code fields reloaded with new classification scheme
NEWS	12	OCT 19	LOGOFF HOLD duration extended to 120 minutes
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NEWS	14	OCT 23	Option to turn off MARPAT highlighting enhancements available
NEWS	15	OCT 23	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS	16	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS	17	OCT 30	CHEMLIST enhanced with new search and display field
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NEWS	19	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS	20	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS	21	NOV 13	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS	22	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS	23	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS	24	NOV 20	CA/CAplus patent kind codes will be updated
NEWS	25	DEC 01	CAS REGISTRY updated with new ambiguity codes

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19632922	A1	19980219	DE 1996-19632922	19960816 <--
EP 825170	A2	19980225	EP 1997-113444	19970804
EP 825170	A3	19980415		
EP 825170	B1	20010110		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
ES 2154863	T3	20010416	ES 1997-113444	19970804
US 5801276	A	19980901	US 1997-910442	19970805
JP 10067703	A2	19980310	JP 1997-228936	19970812
PRIORITY APPLN. INFO.:			DE 1996-19632922	A 19960816

PATENT CLASSIFICATION CODES:

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19632922	ICM	C07C059-01
	ICS	C07C051-285; C07C051-235
	IPCI	C07C0059-01 [ICM,6]; C07C0059-00 [ICM,6,C*]; C07C0051-285 [ICS,6]; C07C0051-235 [ICS,6]; C07C0051-16 [ICS,6,C*]
	IPCR	C07C0051-16 [I,C*]; C07C0051-285 [I,A]; C07C0059-00 [I,C*]; C07C0059-01 [I,A]
EP 825170	IPCI	C07C0059-01 [ICM,6]; C07C0059-00 [ICM,6,C*]; C07C0051-285 [ICS,6]; C07C0051-16 [ICS,6,C*]
	IPCR	C07C0051-16 [I,C*]; C07C0051-285 [I,A]; C07C0059-00 [I,C*]; C07C0059-01 [I,A]
	ECLA	C07C051/285+59/01
ES 2154863	IPCI	C07C0059-01 [ICM,7]; C07C0059-00 [ICM,7,C*]; C07C0051-285 [ICS,7]; C07C0051-16 [ICS,7,C*]
	IPCR	C07C0051-16 [I,C*]; C07C0051-285 [I,A]; C07C0059-00 [I,C*]; C07C0059-01 [I,A]
US 5801276	IPCI	C07C0051-235 [ICM,6]; C07C0051-16 [ICM,6,C*]
	IPCR	C07C0051-16 [I,C*]; C07C0051-285 [I,A]; C07C0059-00 [I,C*]; C07C0059-01 [I,A]
	NCL	562/531.000
	ECLA	C07C051/285+59/01
JP 10067703	IPCI	C07C0059-01 [ICM,6]; C07C0059-00 [ICM,6,C*]; C07C0051-285 [ICS,6]; C07C0051-16 [ICS,6,C*]

OTHER SOURCE(S):

CASREACT 128:127751

ABSTRACT:

Hydroxypivalic acid, useful as an industrial intermediate in the preparation of water-based lacquers (no data), is prepared in high yield and selectivity by the oxidation of hydroxypivalaldehyde at 60-80° using an aqueous H2O2 solution in such a manner that the concentration of H2O2 does not exceed 4% of the reaction mixture and that the H2O2 solution addition is terminated when the hydroxypivalaldehyde concentration becomes less than 1%.

SUPPL. TERM: hydroxypivalic acid manuf; hydroxypivalaldehyde oxidn manuf  
hydroxypivalic acid; hydrogen peroxide oxidn  
hydroxypivalaldehyde manuf hydroxypivalic

INDEX TERM: Oxidation  
(liquid-phase; of hydroxypivalaldehyde with hydrogen peroxide oxidation in the manufacture of hydroxypivalic acid)

INDEX TERM: 597-31-9P, Hydroxypivalaldehyde  
ROLE: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(process for the production of hydroxypivalic acid by the hydrogen peroxide oxidation of hydroxypivalaldehyde)

INDEX TERM: 4835-90-9P, Hydroxypivalic acid  
ROLE: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)



(process for the production of hydroxypivalic acid by the hydrogen peroxide oxidation of hydroxypivalaldehyde)

INDEX TERM: 50-00-0, Formalin, reactions 78-84-2, Isobutyraldehyde  
7722-84-1, Hydrogen peroxide, reactions  
ROLE: RCT (Reactant); RACT (Reactant or reagent)  
(process for the production of hydroxypivalic acid by the hydrogen peroxide oxidation of hydroxypivalaldehyde)

INDEX TERM: 7732-18-5, Water, uses  
ROLE: NUU (Other use, unclassified); USES (Uses)  
(solvent; process for the production of hydroxypivalic acid by the hydrogen peroxide oxidation of hydroxypivalaldehyde)

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	6.86	7.07
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-0.75	-0.75

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STRUCTURE FILE UPDATES: 8 DEC 2006 HIGHEST RN 915121-42-5  
DICTIONARY FILE UPDATES: 8 DEC 2006 HIGHEST RN 915121-42-5

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> e Hydroxypivalic acid/cn

E1	1	HYDROXYPIVALDEHYDE ISOBUTYRATE/CN
E2	1	HYDROXYPIVALDEHYDE OXIME/CN
E3	1 -->	HYDROXYPIVALIC ACID/CN
E4	1	HYDROXYPIVALIC ACID METHYL ESTER/CN
E5	1	HYDROXYPIVALIC ACID NEOPENTYL GLYCOL ESTER/CN
E6	1	HYDROXYPIVALIC ACID NEOPENTYL GLYCOL ESTER-ISOPHORONE DIISOCYANATE-TRIMETHYLOLPROPANE COPOLYMER/CN
E7	1	HYDROXYPIVALIC ACID NEOPENTYL GLYCOL ESTER-MDI COPOLYMER/CN
E8	1	HYDROXYPIVALIC ACID-1-ISOCYANATO-4(OR 3)-(ISOCYANATOMETHYL)-1-METHYLCYCLOHEXANE COPOLYMER/CN
E9	1	HYDROXYPIVALIC ACID-IPDI-PHTHALIC ANHYDRIDE-TRIMETHYLOLPROPANE COPOLYMER/CN
E10	1	HYDROXYPIVALIC ACID-ISOPHTHALIC ACID-NEOPENTYL GLYCOL-NEOPENTYL GLYCOL HYDROXYPIVALATE-PRIMID QM 1260-TEREPHTHALIC ACID COPOLYMER/CN
E11	1	HYDROXYPIVALIC ACID-ISOPHTHALIC ACID-NEOPENTYL GLYCOL-PRIMID



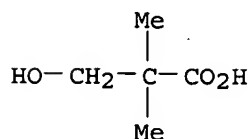
QM 1260-TEREPHTHALIC ACID COPOLYMER/CN  
 E12 1 HYDROXYPIVALIC ACID-ISOPHTHALIC ACID-NEOPENTYL GLYCOL-PRIMID  
 XL 552-TEREPHTHALIC ACID COPOLYMER/CN

=> s e3

L2 1 "HYDROXYPIVALIC ACID"/CN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
 RN 4835-90-9 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Propanoic acid, 3-hydroxy-2,2-dimethyl- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Hydracrylic acid, 2,2-dimethyl- (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN  $\alpha,\alpha$ -Dimethyl- $\beta$ -hydroxypropionic acid  
 CN 2,2-Dimethyl-3-hydroxypropanoic acid  
 CN 2,2-Dimethyl-3-hydroxypropionic acid  
 CN 2,2-Dimethylhydracrylic acid  
 CN 3-Hydroxy-2,2-dimethylpropanoic acid  
 CN 3-Hydroxy-2,2-dimethylpropionic acid  
 CN Hydroxypivalic acid  
 CN NSC 115936  
 CN Oxypivalic acid  
 MF C5 H10 O3  
 CI COM  
 LC STN Files: ANABSTR, BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMLIST, CIN, CSCHM, IFICDB, IFIPAT, IFIUDB, SPECINFO, SYNTHLINE,  
 TOXCENTER, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

206 REFERENCES IN FILE CA (1907 TO DATE)  
 64 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 206 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e hydroxypivalaldehyde/cn

E1 1 HYDROXYPIPERIDONE/CN  
 E2 1 HYDROXYPIRACETAM/CN  
 E3 1 --> HYDROXYPIVALALDEHYDE/CN  
 E4 1 HYDROXYPIVALALDEHYDE DIMER/CN  
 E5 1 HYDROXYPIVALDEHYDE/CN  
 E6 1 HYDROXYPIVALDEHYDE CYANOHYDRIN/CN  
 E7 1 HYDROXYPIVALDEHYDE ISOBUTYRATE/CN  
 E8 1 HYDROXYPIVALDEHYDE OXIME/CN  
 E9 1 HYDROXYPIVALIC ACID/CN  
 E10 1 HYDROXYPIVALIC ACID METHYL ESTER/CN  
 E11 1 HYDROXYPIVALIC ACID NEOPENTYL GLYCOL ESTER/CN  
 E12 1 HYDROXYPIVALIC ACID NEOPENTYL GLYCOL ESTER-ISOPHORONE DIISOC



YANATE-TRIMETHYLOLPROPANE COPOLYMER/CN

=> s e3

L3 1 HYDROXYPIVALALDEHYDE/CN

=> d l3

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 597-31-9 REGISTRY

ED Entered STN: 16 Nov 1984

CN Propanal, 3-hydroxy-2,2-dimethyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Hydracrylaldehyde, 2,2-dimethyl- (6CI, 7CI, 8CI)

OTHER NAMES:

CN  $\alpha,\alpha$ -Dimethyl- $\beta$ -hydroxypropionaldehyde

CN 2,2-Dimethyl-3-hydroxypropanal

CN 2,2-Dimethyl-3-hydroxypropionaldehyde

CN 2-(Hydroxymethyl)-2-methylpropanal

CN 2-(Hydroxymethyl)isobutyraldehyde

CN 3-Hydroxy-2,2-dimethylpropanal

CN 3-Hydroxy-2,2-dimethylpropionaldehyde

CN 3-Hydroxypivalaldehyde

CN Hydroxypivalaldehyde

CN Hydroxypivaldehyde

CN Pentaaldol

CN Pentaldol

MF C5 H10 O2

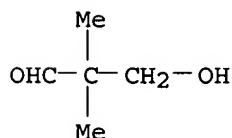
CI COM

LC STN Files: ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSChem, HSDB\*, IFICDB, IFIPAT, IFIUDb, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)



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326 REFERENCES IN FILE CA (1907 TO DATE)

10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

326 REFERENCES IN FILE CAPLUS (1907 TO DATE)

15